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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 057,009	01 24 2002	Wei-Su Chen	64,600-095	3605

7590

06 20 2003

TUNG & ASSOCIATES

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EXAMINER

HOANG, QUOC DINH

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 06 20 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,009

Applicant(s)

CHEN ET AL.

Examiner

Quoc D Hoang

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 17 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 11-14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) 5, 10, 15 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-9, 11-14, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penunuri. (U.S. Pat 5,287,036) in view of Oldfield. (U.S. Pat 6,509,821).

Regarding claims 1, 6, 11 and 16, Penunuri. teaches a method of forming a micro fabrication comprising the steps of providing a microelectronic substrate 130 (col. 1, lines 55-65 and Fig. 1); and forming over the substrate 130 a spirally patterned conductor layer 120 (col. 11, lines 55-65 and Fig. 1).

Penunuri. does not disclose the spirally patterned conductor layer 130 being spirally topographically tapered in a vortex shape.

Oldfield. teaches forming a microwave device comprising a spirally patterned conductor layer 2 being spirally topographically tapered in a vortex shape (col. 3, lines 12-65 and Fig. 3A). At the time of the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the spirally tapered conductor layer teaching of Oldfield with Penunuri's spirally patterned conductor layer, because it would have reduced resonant loss as taught by Oldfield, column 2, lines 2-12.

Regarding claims 2, 7, 12, and 17, Penunuri teaches the spirally patterned conductor layer 120 is an inductor (col. 11, lines 55-65 and Fig. 1).

Regarding claims 3, 4, 8, 9, 13, 14, 18 and 19, Oldfield teaches the spirally patterned conductor layer 130 being spirally topographically tapered in a vortex shape without teaching the pointed end of the vortex is directed towards or away the substrate. However, the pointed end of the vortex is directed towards or away the substrate is considered an obvious design optimization and do not lend novelty of to the claimed process.

***Allowable Subject Matter***

3. Claims 5, 10, 15 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claims, to teach the vortex shaped has an opening end across dimension from about 50-900 microns and a height of from about 50-600 microns

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc Hoang whose telephone number is (703) 306-5795. The examiner can normally be reached on Monday-Friday from 8.00 AM to 5.00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (703) 308-4910. The fax phone numbers of the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Quoc Hoang  
Patent examiner/AU 2818.



HOAI HO  
PRIMARY EXAMINER